

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): An image-processing device comprising:

an image-reading unit that reads image data from a document optically;

an image-recording unit that records the image data read onto recording paper;

a first-density-correction unit that corrects first density characteristics that depend on said image-reading unit;

a second-density-correction unit that corrects second characteristics to reproduce density of the document;

a third-density-correction unit that corrects third density characteristics that depend on said image-recording unit; and

a control unit that independently controls each of said first, second and third density-correction units to execute density correction.

Claim 2 (Original): The image-processing device as claimed in claim 1, wherein said control unit includes a switch unit that switches a filter coefficient according to density of said image data, a data-correction unit that executes data correction according to a density level, and a dot-correction unit that corrects formation of dots to be recorded.

Claim 3 (Original): The image-processing device as claimed in claim 2, wherein said switch unit includes a selection unit that sets a correction coefficient individually for each of a low density area, a high density area, and an intermediate density area based on a fixed threshold, and selects a selection signal.

Claim 4 (Original): The image-processing device as claimed in claim 2, wherein said data-correction unit sets a signal different from said image data, and executes one of addition of the signal to the said image data and subtraction of the signal from said image data, followed by executing a gradation-reproduction process on said image data.

Claim 5 (Original): The image-processing device as claimed in claim 2, wherein said dot-correction unit corrects data of adjacent pixels in two dimensions based on arrangement of pixels.

Claim 6 (Original): The image-processing device as claimed in claim 1, further comprising an image-quality-selecting unit that selects an image-quality mode, wherein said control unit controls one or three of the first, second, and third density correction based on the image-quality mode selected by said image-quality-selecting unit.

Claim 7 (Original): The image-processing device as claimed in claim 6, wherein said image-quality-selecting unit includes a parameter-grouping unit that collects parameters for density correction as a group, and an image-quality-mode-assigning unit that assigns the group created by the parameter-grouping unit to an image-quality mode.

Claim 8 (Original): The image-processing device as claimed in claim 7, wherein said image-quality-mode-assigning unit includes an image-quality-mode-selecting unit that selects an image-quality mode for regular use among a plurality of predetermined image-quality modes, an image-quality-correction unit that corrects characteristics of the image-quality mode selected by the image-quality-mode-assigning unit, a parameter-adjusting unit that adjusts parameters for the characteristics of the image-quality mode corrected by the image-

quality-correction unit, and a parameter-storing unit that stores the parameters for the characteristics of the image-quality mode adjusted by the parameter-adjusting unit.

Claim 9 (Original): The image-processing device as claimed in claim 7, wherein said image-quality-mode-assigning unit includes an image-quality-mode-selecting unit that selects an image-quality mode for regular use among a plurality of predetermined image-quality modes, an image-reading-correction unit that corrects image-reading characteristics of said image-processing device, an image-reading-parameter-adjusting unit that adjusts parameters for the image-reading characteristics of the image-processing device corrected by the image-reading-correction unit, and an image-reading-parameter-storing unit that stores the parameters for the image-reading characteristics of the image-processing device adjusted by the image-reading-parameter-adjusting unit.

Claim 10 (Original): The image-processing device as claimed in claim 7, wherein said image-quality-mode-assigning unit includes an image-quality-mode-selecting unit that selects an image-quality mode for regular use among a plurality of predetermined image-quality modes, a pixel-generation-correction unit that corrects characteristics of pixel generation, a pixel-parameter-adjusting unit that adjusts parameters for the characteristics of the pixel generation corrected by the pixel-generation-correction unit, and a pixel-parameter-storing unit that stores the parameters for the characteristics of the pixel generation adjusted by the pixel-parameter-adjusting unit.

Claim 11 (Original): The image-processing device as claimed in claim 7, wherein said image-quality-mode-assigning unit includes an image-quality-mode-selecting unit that selects an image-quality mode for regular use among a plurality of predetermined image-

quality modes, an image-quality-correction unit that corrects characteristics of the image-quality mode selected by the image-quality-mode-assigning unit, a relative-parameter-adjusting unit that adjusts parameters for the characteristics of the image-quality mode corrected by the image-quality-correction unit relatively to the parameters set once by the image-quality-correction unit, and a parameter-storing unit that stores the parameters for the characteristics of the image-quality mode adjusted by the relative-parameter-adjusting unit.

Claim 12 (Original): The image-processing device as claimed in claim 7, wherein said image-quality-mode-assigning unit includes an image-quality-mode-selecting unit that selects an image-quality mode for regular use among a plurality of predetermined image-quality modes, an image-reading-correction unit that corrects image-reading characteristics of said image-processing device, a relative-image-reading-parameter-adjusting unit that adjusts parameters for the image-reading characteristics of the image-processing device corrected by the image-reading-correction unit relatively to the parameters once set by the image-reading-correction unit, and an image-reading-parameter-storing unit that stores the parameters for the image-reading characteristics of the image-processing device adjusted by the relative-image-reading-parameter-adjusting unit.

Claim 13 (Original): The image-processing device as claimed in claim 7, wherein said image-quality-mode-assigning unit includes an image-quality-mode-selecting unit that selects an image-quality mode for regular use among a plurality of predetermined image-quality modes, a pixel-generation-correction unit that corrects characteristics of pixel generation, a relative-pixel-parameter-adjusting unit that adjusts parameters for the characteristics of the pixel generation corrected by the pixel-generation-correction unit relatively to the parameters once set by the pixel-generation-correction unit, and a pixel-

parameter-storing unit that stores the parameters for the characteristics of the pixel generation adjusted by the relative-pixel-parameter-adjusting unit.

Claim 14 (Original): A method of processing an image by use of an image-processing device that includes an image-reading unit, an image-recording unit, a first-density correction unit, a second-density-correction unit and a third-density-correction unit, said method comprising the steps of:

- reading image data from a document optically by use of the image-reading unit;
- recording the image data on recording paper by use of the image-recording unit;
- correcting first density characteristics that depend on said image-reading unit by use of the first-density-correction unit;

- correcting second characteristics to reproduce density of the document by use of the second-density-correction unit;

- correcting third density characteristics that depend on said image-recording unit by use of the third-density correction unit; and

- controlling said first-density-correction unit, said second-density-correction unit, and said third-density-correction unit independently.

Claim 15 (Original): The method as claimed in claim 14, further comprising the steps of:

- switching a filter coefficient according to density of said image data;
- correcting data according to a density level; and
- correcting formation of dots to be recorded.

Claim 16 (Original): The method as claimed in claim 15, further comprising the steps of:

setting a correction coefficient individually for each of a low density area, a high density area, and an intermediate density area based on a fixed threshold; and  
selecting a selection signal among said low, high, and intermediate density areas.

Claim 17 (Original): The method as claimed in claim 15, further comprising the steps of:

setting a signal different from said image data;  
executing one of addition of the signal to the said image data and subtraction of the signal from said image data; and  
executing a gradation-reproduction process on said image data.

Claim 18 (Original): The method as claimed in claim 15, further comprising the step of correcting data of adjacent pixels in two dimensions based on arrangement of pixels.

Claim 19 (Original): The method as claimed in claim 14, further comprising the steps of:

selecting an image-quality mode that determines a type of image processing; and  
controlling density correction executed by one or all of the first, second, and third density correction units based on the image-quality mode selected.

Claim 20 (Original): The method as claimed in claim 19, further comprising the steps of:

collecting parameters for the density correction as a group; and

assigning the created group to an image-quality mode.

Claim 21 (Original): An image-processing device comprising:

an image-reading unit that reads image data from a document optically;

an image-recording unit that records the image data read by said image-reading unit  
onto recording paper;

a first-density-correction unit that corrects first density characteristics that depend on  
said image-reading unit;

a second-density-correction unit that corrects second characteristics to reproduce  
density of the document; and

a control unit that independently controls each of said first and second density-  
correction units to execute density correction based on an image-quality mode applied by an  
operation unit.

Claim 22 (Original): The image-processing device as claimed in claim 21, wherein  
said operation unit includes an operation screen where image-quality modes are displayed,  
one of said image-quality modes being selected so that each of said first and second density-  
correction units is adjusted individually by the control unit.

Claim 23 (Currently amended): An image-processing device comprising:

an image-reading unit that reads image data from a document optically;

an image-recording unit that records the image data read by said image-reading unit  
onto recording paper;

a density-correction unit that corrects density characteristics that depend on said  
image-recording unit; and

a control unit that independently controls said density-correction unit to execute density correction based on an image-quality mode applied by an operation unit, wherein a correction pattern according to characteristics of the image-recording unit can be set independently from a correction pattern according to the image-quality mode.

Claim 24 (Original): The image-processing device as claimed in claim 23, wherein said operation unit includes an operation screen where image-quality modes are displayed, one of said image-quality modes being selected so that said density-correction unit is adjusted individually by the control unit.

Claim 25 (Original): A method of processing an image by use of an image-processing device that includes an image-reading unit, an image-recording unit, a first-density correction unit and a second-density-correction unit, said method comprising the steps of:

reading image data from a document optically by use of the image-reading unit;  
recording the image data on recording paper by use of the image-recording unit;  
correcting first density characteristics that depend on said image-reading unit by use of the first-density-correction unit;  
correcting second characteristics to reproduce density of the document by use of the second-density-correction unit; and  
controlling said first-density-correction unit and said second-density-correction unit independently.

Claim 26 (Original): The method as claimed in claim 25, further comprising the steps of:

selecting an image-quality mode that determines a type of image processing; and



controlling density correction executed by one or both of said first and second density-correction units independently based on the image-quality mode selected.

Claim 27 (Currently amended): A method of processing an image by use of an image-processing device that includes an image-reading unit, an image-recording unit and a density correction unit, said method comprising the steps of:

reading image data from a document optically by use of the image-reading unit;  
recording the image data on recording paper by use of the image-recording unit;  
correcting density characteristics that depend on said image-recording unit by use of the density correction unit; and  
controlling said density-correction unit independently, wherein  
a correction pattern according to characteristics of the image-recording unit can be set independently from a correction pattern according to the image-quality mode.

Claim 28 (Original): The method as claimed in claim 27, further comprising the steps of:

selecting an image-quality mode that determines a type of image processing; and  
controlling density correction executed by said density-correction unit independently based on the image-quality mode selected.

Claim 29 (Original): A record medium readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for processing an image by use of an image-processing device that includes an image-reading unit an image-recording unit, a first-density-correction unit, a second-density-correction unit and a third-density-correction unit, said method steps comprising:

reading image data from a document optically by use of the image-reading unit;  
recording the image data on recording paper by use of the image-recording unit;  
correcting first density characteristics that depend on said image-reading unit by use of the first-density-correction unit;  
correcting second characteristics to reproduce density of the document by use of the second-density-correction unit;  
correcting third density characteristics that depend on said image-recording unit by use of the third-density correction unit; and  
controlling said first-density-correction unit, said second-density-correction unit, and said third-density-correction unit independently.

Claim 30 (Original): The record medium as claimed in claim 29, wherein said method steps comprising:

selecting an image-quality mode that determines a type of image processing; and  
controlling density correction executed by said density-correction unit independently based on the image-quality mode selected.

Claim 31 (Original): An image-processing system comprising:  
an image-reading unit that reads image data from a document optically;  
an image-recording unit that records the image data read onto recording paper;  
a first-density-correction unit that corrects first density characteristics that depend on said image-reading unit;  
a second-density-correction unit that corrects second characteristics to reproduce density of the document;

a third-density-correction unit that corrects third density characteristics that depend on said image-recording unit;

a control unit that independently controls each of said first, second and third density-correction units to execute density correction; and

an external-application interface that exchanges the image data with an external application.

Claim 32 (Original): The image-processing system as claimed in claim 31, wherein the image data is transmitted through said external-application interface to the external application after being processed through said first and second density-correction unit.

Claim 33 (Original): The image-processing system as claimed in claim 31, wherein the image data is processed through said third-density-correction unit after being received from the external application through said external-application interface.

Claim 34 (New): The image processing device of claim 23, wherein the correction pattern of the density correction unit is registerable.

Claim 35 (New): The method of claim 27, wherein the correction pattern of the density correction unit is registerable.